

Northern California Bird Monitoring Program:
2003 Effort Summary

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Introduction

In 2003, the Klamath Bird Observatory and US Forest Service Redwood Sciences Laboratory, continued working with the Bureau of Reclamation, Joint Fire Sciences Program, PRBO Conservation Science, Trinity River Restoration Program, Klamath National Forest, Shasta-Trinity National Forest Trinity River Management Unit and South Fork Management Unit, National Park Service Klamath Network Inventory and Monitoring Program, Lassen Volcanic National Park, Redwood National and State Parks, Whiskeytown National Recreation Area, and others to continue bird and habitat monitoring efforts in northern California. The objectives of this program are to collect data that provide an index to species diversity and abundance in riparian and upland habitats, to evaluate the reproductive success and population health of Neotropical migratory birds, to maintain a long term monitoring effort for tracking landbird population trends, to investigate the effects of wildfire and fuels treatments on birds and their habitats, to investigate the effects of grazing on birds and their habitats, and to test methods for effectively monitoring special species such as our regions small owls. This report provides a brief summary of our 2003 monitoring efforts in northern California.

Constant Effort Mist Netting

In 2003, we continued to work with the Bureau of Land Management Redding District, Bureau of Reclamation, Shasta-Trinity National Forest Trinity River Management Unit and South Fork Management Unit, PRBO Conservation Science, and Trinity River Restoration Program to operate seven constant effort (CES) mist netting stations during the breeding, dispersal, and migration seasons. During each day's effort, between 10 and 13 12m x 2.5m, 36mm mesh mist nets are opened for five hours, with two area search surveys completed. Also, standard point count and vegetation surveys were completed at both CES and Rapid Ornithological Inventory sites. Our efforts resulted in a total of 110 days of bird banding during which 5624.30 net hours were completed (Table 1). The stations operated were Clear Creek (CLCR) on Clear Creek, 4 miles south of Redding, Indian Valley (INVA) on Indian Valley Creek in the Shasta-Trinity National Forest South Fork Management Unit, Hamilton Ponds (HAMI) on Trinity River 8 miles east of Douglas City, Hocker Road (HOCK) on Trinity River at Dutch Creek, Redding Bar (REBA) on Trinity River at BLM Douglas City Campground, Steel Bridge (river right) (SBRR) on Trinity River 7 miles west of Douglas City, and Steiner Flat Road (SFRD) on Trinity River 2 miles south of Douglas City. During mist-netting efforts at these sites, a

total of 216 area search censuses were conducted. Of the 2657 total birds captured at these stations this year, 1956 birds were banded, 560 recaptures were recorded, and 141 birds were released unbanded (Table 1). Also, a Rapid Ornithological Inventory was conducted at Towerhouse Historic District (THHD) in the Whiskeytown National Recreation Area from October 8-9 (Table 1).

The Clear Creek (CLCR) station was operated during the fall migration season (September-October) in partnership with PRBO Conservation Science, which operates the site during the breeding (May-August) season. The Redding Bar (REBA) station was operated during the breeding season only. The Hamilton Ponds (HAMI), Hocker Road (HOCK), Redding Bar (REBA), Steel Bridge, river right (SBRR), and Steiner Flat Road station cluster are a key component of the Trinity River Restoration Program. These stations were established to create a baseline database and to continue long-term monitoring of bird species presence and demography in riparian habitat of the river. The stations are located both inside and outside of restoration-effort areas. Of these sites, the Hamilton Ponds (HAMI) station had the highest species richness and capture rate during both the breeding and fall migration seasons (Table 1).

The Clear Creek (CLCR) station is part of a similar riparian restoration program within the Sacramento River drainage.

The Indian Valley (INVA) station is within the Hayfork Adaptive Management Area. The US Forest Service Redwood Sciences Laboratory and Klamath Bird Observatory have operated it since 1994. Of the stations operated by the Klamath Bird Observatory in California during 2003, Indian Valley had both the highest species richness and capture rate (Table 1).

Special Species Monitoring – Small Owls

During 2003, small owl netting and survey efforts also were conducted at the Clear Creek, Indian Valley, Steel Bridge, river right, Steiner Flat Road, and Towerhouse Historical District sites. During 36 netting efforts a total of 202 net hours were completed. A total of 3 Western Screech-Owls were captured, 2 at the Indian Valley site and 1 at Steel Bridge, river right (Table 2). These efforts included 41 surveys, during which 11 owls were detected, 1 Northern Pygmy-Owl at the Clear Creek site, 4 Northern Saw-whet Owls and 2 Western Screech-Owls at the Indian Valley site, 3 Northern Pygmy-Owls at the Steel Bridge, river right site, and 1 Northern Pygmy-Owl at the Towerhouse Historic District site (Table 3).

Bird and Habitat Surveys

In 2003, KBO continued to conduct breeding bird surveys with associated habitat data in northern California using standard point count and vegetation monitoring methodologies. In addition to the area search surveys conducted at each constant effort station (CLCR,

HAMI, HOCK, INVA, REBA, SBRR, SFRD), we also conducted point count surveys to complement the long-term trend data being collected at those sites (Table 4).

During 2003, KBO continued its intensive and extensive breeding and migrating bird surveys through within-year and yearly coverage in this region. An innovative modification of the standard area search survey was implemented by KBO for the first time in 2003. This method was used in fall season surveys overlaid count stations, which were previously surveyed during the spring season.

As part of our Joint Fire Sciences (JFS) program we continued with a second year of monitoring in association with the Klamath National Forest fuels treatment projects. During 2003, KBO completed 26 routes here, with 22 of these repeated for the fourth consecutive year, and four repeated for the tenth consecutive year (Table 4). During the spring season (May-early July) 25 of the 26 routes were surveyed two times. A total of 922 station counts were completed for the JFS program.

Working with the National Park Service Klamath Network Inventory and Monitoring Program, KBO conducted 272 surveys with associated habitat data using a modified area search, and standard point count and vegetation monitoring methodologies (Table 4). At the Redwood National and State Parks, 11 routes that included 128 count stations were completed during the spring season using the point count method. During the fall season, nine of these routes (48 count stations) using the modified area search method were repeated for a total of 176 station counts (Table 4). At the Lassen Volcanic National Park and Whiskeytown National Recreation Area, 18 routes with 96 area search surveys were completed during the fall season. Ten routes including 48 station counts within the Lassen Volcanic National Park were surveyed (using the point count method) by PRBO Conservation Science during the spring season (Table 4).

Outreach

As a part of our bird monitoring efforts the Klamath Bird Observatory offered outreach and training opportunities for partners. In 2003, a total of 9 college-level Intern Students, including 3 international students, were trained. During the season, KBO biologists and interns worked with regional cooperators at their stations. A mid-season workshop was offered for cooperators in 2003 and at the end of the season a North American Banding Council bander certification session was held.

Conclusion

In 2004 the Klamath Bird Observatory will continue working with our partners to maintain California Partners In Flight long-term monitoring program, that fulfills monitoring objectives set forth by the National Partners In Flight Monitoring Working Group.

Tables

Table 1. 2003 effort summary at four Rogue Valley constant effort mist netting stations. (EFFORTS = number of visits to each site; RECAP, NEW, UNBANDED and TOTAL = number of previously banded birds, newly banded birds, birds released without being banded, and total number of birds captured respectively; AVERAGE SPECIES RICHNESS = the avg. number of species captured each day; CENSUS = number of area search censuses conducted; PERSON DAYS = number of person days spent; AVG DAILY CAPTURES and AVG DAILY RECAPS = average total captures and recaptures per day; CAPTURES PER NET HOUR = average total captures per hour)

SEASON TOTALS:						AVERAGE					AVG.	AVG.	CAPTURES
STATION	TYPE	EFFORTS	RECAP	NEW	UNBANDED	TOTAL	SPECIES RICHNESS	CENSUSES	NET HOURS	PERSON DAYS	DAILY CAPTURES	DAILY RECAPS	PER NET HOUR
ORCA	CES	17	56	246	26	328	7.3	33	816.42	38	19.3	3.3	0.4
SNCO	CES	25	115	329	28	472	9.0	48	1939.30	58	18.9	4.6	0.2
WIIM	CES	30	296	1086	80	1462	12.0	61	1799.60	123	48.7	9.9	0.8
WIWI	CES	21	84	713	69	866	11.7	40	1068.98	69	41.2	4.0	0.8
BOXO	ROI	3	0	87	10	97	12.3	7	123.18	6	32.3	0.0	0.8
TOTAL		96	551	2461	213	3225		189	5747.48	294			

BREEDING SEASON (May-August):							AVERAGE				AVG.	AVG.	CAPTURES
STATION	TYPE	EFFORTS	RECAP	NEW	UNBANDED	TOTAL	SPECIES RICHNESS	CENSUSES	NET HOURS	PERSON DAYS	DAILY CAPTURES	DAILY RECAPS	PER NET HOUR
ORCA	CES	9	38	179	24	241	8.9	17	444.75	21	26.8	4.2	0.5
SNCO	CES	13	62	185	19	266	9.5	24	1012.40	30	20.5	4.8	0.3
WIIM	CES	10	59	321	35	415	11.7	19	599.92	41	41.5	5.9	0.7
WIWI	CES	11	21	278	14	313	10.4	21	594.22	35	28.5	1.9	0.5
BOXO	ROI	3	0	87	10	97	12.3	7	123.18	6	32.3	0.0	0.8
TOTAL		46	180	1050	102	1332		88	2774.47	133			

MIGRATION SEASON (September-October):						AVERAGE					AVG.	AVG.	CAPTURES
STATION	TYPE	EFFORTS	RECAP	NEW	UNBANDED	TOTAL	SPECIES RICHNESS	CENSUSES	NET HOURS	PERSON DAYS	DAILY CAPTURES	DAILY RECAPS	PER NET HOUR
ORCA	CES	8	18	67	2	87	5.5	16	371.67	17	10.9	2.3	0.2
SNCO	CES	12	53	144	9	206	8.6	24	926.90	28	17.2	4.4	0.2
WIIM	CES	20	237	765	45	1047	12.2	42	1199.68	82	52.4	11.9	0.9
WIWI	CES	10	63	435	55	553	13.3	19	474.77	34	55.3	6.3	1.2
TOTAL		50	371	1411	111	1893		101	2973.02	161			

Table 2. Small owl banding effort summary for the Rogue Valley. (STATION= station four letter code; TYPE= type of station (CES or ROI); EFFORTS= number visits to each site; TOTAL CAPTURES= number of captures; NOPO, NSWOW, WESO, and FLOW= number of Northern Pygmy, Northern Saw-whet, Western Screech, and Flammulated Owl captures; NET HRS= total net hours)

BANDING:

		TOTAL						
STATION	TYPE	EFFORTS	CAPTURES	NOPO	NSWO	WESO	FLOW	NET HRS
ORCA	CES	1	0	0	0	0	0	17.70
SNCO	CES	5	1	0	0	1	0	41.30
BOXO	ROI	2	2	0	0	0	2	13.50
TOTALS		8	3	0	0	1	2	73

Table 3. Small owl census effort summary for the Rogue Valley. (STATION= station four letter code; TYPE= type of station (CES or ROI); CENSUSES= number censuses conducted; TOTAL DETECTIONS= number of detections; NOPO, NSWOW, WESO, and FLOW= number of Northern Pygmy, Northern Saw-whet, Western Screech, and Flammulated Owl detections)

CENSUS:

		TOTAL					
STATION	TYPE	CENSUSES	DETECTIONS	NOPO	NSWO	WESO	FLOW
ORCA	CES	2	1	0	0	0	1
SNCO	CES	9	5	1	0	4	0
BOXO	ROI	3	1	0	0	0	1
TOTALS		14	7	1	0	4	2